

Application No. 10/087,256
Amendment "A" dated December 6, 2004
Reply to Office Action mailed September 9, 2004

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A biodegradable composition comprising:
at least one soft synthetic thermoplastic biodegradable polymer having a glass transition temperature less than about $-10^{\circ}\text{C}.$; and
at least one stiff synthetic thermoplastic biodegradable polymer having a glass transition temperature greater than about $10^{\circ}\text{C}.$ included in an amount greater than about 55% by combined weight of the soft and stiff biodegradable polymers,
wherein the at least one stiff synthetic thermoplastic biodegradable polymer is selected from the group comprising polyesteramides, polyethylene terephthalates modified by replacing a portion of terephthalate groups with aliphatic diacid ester groups, and terpolymers including units form from glycolide, lactide and ϵ -caprolactone.
wherein the biodegradable composition is suitable for formation into at least one of sheets or films.
2. (Cancelled)
3. (Currently Amended) A biodegradable composition as defined in claim 1, wherein the soft biodegradable polymer includes at least one of an aliphatic polyester including units formed from at least one of a lactide or a hydroxyacid having at least 5 carbon atoms, a polyester including units formed from an aliphatic diol, an aliphatic diacid and an aromatic diacid, a polyester including units formed from succinic acid and an aliphatic diol, ~~an aliphatic-aromatic copolyester including units formed from adipic acid, dialkyl terephthalate, and at least one aliphatic diol,~~ polycaprolactone, ~~or polyhydroxybutyrate-hydroxyvalerate copolymer [(.)]~~ polybutylene succinate, polybutylene succinate-adipate, or polyethylene succinate.
4. (Original) A biodegradable composition as defined in claim 1, further including thermoplastic starch.

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5. (Original) A biodegradable composition as defined in claim 4, wherein the thermoplastic starch is substantially free of plasticizers.

6. (Original) A biodegradable composition as defined in claim 4, wherein the thermoplastic starch is included in an amount of less than about 10% by combined weight of the thermoplastic starch and the soft and stiff synthetic biodegradable polymers.

7. (Original) A biodegradable composition as defined in claim 1, wherein the stiff biodegradable polymer is included in a range of about 70% to about 95% by weight of the biodegradable polymer blend.

8. (Original) A biodegradable composition as defined in claim 1, wherein the stiff biodegradable polymer has a glass transition temperature greater than about 15° C.

9. (Original) A biodegradable composition as defined in claim 1, wherein the stiff biodegradable polymer has a glass transition temperature greater than about 25° C.

10. (Original) A biodegradable composition as defined in claim 1, wherein the stiff biodegradable polymer has a glass transition temperature greater than about 35° C.

11. (Original) A biodegradable composition as defined in claim 1, wherein the soft biodegradable polymer has a glass transition temperature less than about -20° C.

12. (Original) A biodegradable composition as defined in claim 1, wherein the soft biodegradable polymer has a glass transition temperature less than about -30° C.

13. (Original) A biodegradable composition as defined in claim 1, further including at least one nonbiodegradable polymer.

14. (Original) A biodegradable composition as defined in claim 1, further including at least one of a particulate filler or a fibrous filler.

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15. (Original) A biodegradable composition as defined in claim 14, wherein the particulate filler comprises an inorganic filler.

16. (Original) A biodegradable composition as defined in claim 15, wherein the inorganic filler is included in an amount greater than about 10% by weight of the biodegradable composition.

17. (Original) A biodegradable composition as defined in claim 15, wherein the inorganic filler is included in an amount greater than about 20% by weight of the biodegradable composition.

18. (Original) A biodegradable composition as defined in claim 15, wherein the inorganic filler is included in an amount greater than about 30% by weight of the biodegradable composition.

19. (Original) A biodegradable composition as defined in claim 14, wherein the particulate filler comprises an organic filler.

20. (Currently Amended) A biodegradable composition comprising:
at least one soft thermoplastic biodegradable polymer having a glass transition temperature less than about -10°C .;
at least one stiff synthetic thermoplastic biodegradable polymer having a glass transition temperature greater than about 10°C .; and
at least one solid filler included in an amount of at least about 30% by weight of the biodegradable composition,
wherein the biodegradable composition is suitable for formation into at least one of sheets or films by means of extrusion, film-blowing, or casting.

21. (Original) A biodegradable composition as defined in claim 20, wherein the solid filler comprises at least one of an inorganic particulate filler or an organic particulate filler.

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22. (Original) A biodegradable composition as defined in claim 21, wherein the inorganic particulate filler is included in an amount greater than about 35% by weight of the biodegradable composition.

23. (Currently Amended) A sheet or film formed from a biodegradable composition comprising:

at least one stiff synthetic thermoplastic biodegradable polymer having a glass transition temperature greater than about 10° C.; and

at least one soft thermoplastic biodegradable polymer having a glass transition temperature less than about -10° C., the soft thermoplastic biodegradable polymer optionally comprising thermoplastic starch, with the proviso that the thermoplastic starch is included in an amount of less than 10% by combined weight of the soft and stiff biodegradable polymers;

wherein the biodegradable composition is ~~suitable for formation~~ formed into at least one of sheets or films the sheet or film by extrusion, film-blowing, or casting.

24. (Original) A biodegradable composition as defined in claim 23, wherein the thermoplastic starch is substantially free of plasticizers.

25. (Currently Amended) A sheet or film formed from a biodegradable composition comprising:

at least one stiff synthetic thermoplastic biodegradable polymer having a glass transition temperature greater than about 10° C.; and

at least one soft thermoplastic biodegradable polymer having a glass transition temperature less than about 0° C., the soft thermoplastic biodegradable polymer optionally comprising thermoplastic starch, with the proviso that the thermoplastic starch is substantially free of plasticizers;

wherein the biodegradable composition is ~~suitable for formation~~ formed into ~~blown films~~ the sheet or film by extrusion, film-blowing, or casting.

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26. (New) A biodegradable composition as defined in claim 1, wherein the soft biodegradable polymer includes at least one of polybutylene succinate, polybutylene succinate adipate, polyethylene succinate, or an aliphatic-aromatic copolyester including units formed from adipic acid, dialkyl terephthalate, and at least one aliphatic diol.